Hoosing the right amp-hour rating for your trolling motor deep cycle battery is crucial to ensure you have enough power for your needs. The amp-hour (Ah) rating indicates how much current your trolling motor battery can provide in an hour, making it an essential factor in determining how long you can stay out on the water.

For example, if your motor draws 5 amps at a low speed, a 100 Ah battery would give you approximately 20 hours of runtime (100 Ah / 5 amps = 20 hours). On the other hand, if your motor draws 20 amps at a high speed, the same battery would last around 5 hours (100 Ah / 20 amps = 5 hours). Understanding this calculation helps you better manage your time on the water. The following data are for reference only.

A good rule of thumb is to choose a deep cycle trolling motor battery with an amp-hour rating that is at least twice the maximum amp draw of your motor. For instance, if your trolling motor draws 50 amps at full power, a 100 Ah lithium trolling motor battery would provide about two hours of runtime. However, since you likely won't run your motor at full power continuously, you can expect longer runtimes at lower speeds. Read the following table to match your most suitable trolling motor battery!

If you don't find your model, please contact support.us@wattcycle.com, our professional team will give you the best choice guide within 24 hours.

Trolling Motor Battery Guide for Motorguide

Trolling Motor	Model(Thrust/size)	Voltage(V)	Max Current (A)	Thrust(LB)	Recommended WattCycle Battery	Full Power Working Time	Low Speed Run Time (Take 5 amps as an example)
	XI3 55/36	12V	42A	55		2.38 hours	20 hours
	XI3 55/54	12V	42A	55		2.38 hours	20 hours
	XI3 55/48	12V	42A	55		2.38 hours	20 hours
	XI3 54/48	12V	42A	54		2.38 hours	20 hours
	XI3 55/60	12V	42A	55		2.38 hours	20 hours
	X3 55/45	12V	40A	55		2.5 hours	20 hours
	X3 55/50	12V	40A	55		2.5 hours	20 hours
	X3 55/36	12V	40A	55		2.5 hours	20 hours
	X3 45/50	12V	35A	45		2.85 hours	20 hours
	X3 45/45	12V	35A	45		2.85 hours	20 hours
	X3 45/36	12V	35A	45		2.85 hours	20 hours
	R3 55/42	12V	42A	55		2.38 hours	20 hours
	R3 40/36	12V	30A	40		3.33 hours	20 hours
	R3 55/36	12V	42A	55		2.38 hours	20 hours
	R3 45/36	12V	35A	45		2.85 hours	20 hours
	R3 30/30	12V	25A	30		4 hours	20 hours
	XI5 55/54	12V	42A	55		2.38 hours	20 hours
	XI5 55/48	12V	42A	55		2.38 hours	20 hours
	XI3 70/60	24V	50A	70		2 hours	20 hours
	XI3 70/54	24V	50A	70		2 hours	20 hours
	XI3 68/48	24V	48A	68		2.08 hours	20 hours

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Trolling Motor	Model(Thrust/size)	Voltage(V)	Max Current (A)	Thrust(LB)	Recommended WattCycle Battery	Full Power Working Time	Low Speed Run Time (Take 5 amps as an example)
	X3 70/50	24V	50A	70		2 hours	20 hours
	X3 70/45	24V	50A	70		2 hours	20 hours
	XI5 80/72	24V	50A	80		2 hours	20 hours
	XI5 80/45	24V	50A	80		2 hours	20 hours
	XI5 80/60	24V	50A	80		2 hours	20 hours
	XI5 80/54	24V	50A	80		2 hours	20 hours
	R5 80/42	24V	50A	80		2 hours	20 hours
	R5 70/42	24V	50A	70		2 hours	20 hours
	Tour 82/45	24V	45A	82		2.22 hours	20 hours
	Tour Pro 82/45	24V	45A	82		2.22 hours	20 hours
	Xi5 105/48	36V	50A	105		2 hours	20 hours
	Xi5 105/54	36V	50A	105		2 hours	20 hours
	Xi5 105/60	36V	50A	105		2 hours	20 hours
	Xi5 105/72	36V	50A	105		2 hours	20 hours
	R5 105/42	36V	50A	105		2 hours	20 hours
	Tour 109/45	36V	50A	109		2 hours	20 hours
	Tour Pro 109/45	36V	50A	109		2 hours	20 hours

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Product Overview

12V 100Ah LiFePO4 Battery for Trolling Motors with Bluetooth

General Information

Battery Model	12V 100Ah Smart for Trolling Motors
Dimensions (L*W*H)	10.2 x 6.6 x 8.2 inches (Group 24 Size)
Weight	23.15lbs / 10.5kg
Operating Voltage	12.8V
Charging Voltage	14.6V±0.2V (CC/CV)
Max. Continuous Output Power	1536W
Max. Continuous Charge Current	120A
Max. Continuous Discharge Current	120A
Max. Discharge Current	220A (≤6s)
Peak Discharge Current	400A (≤0.3s)
Primary Current Protection	220A
Secondary Current Protection	400A

Key Features

The WattCycle 12V 100Ah lithium battery, specifically engineered for trolling motors, combines IP67 waterproof protection with a robust 120A BMS and Bluetooth monitoring. It offers low-temperature auto-recovery (-5°C to 5°C) without disconnecting the load, supports a continuous 120A discharge, and is powered by automotive-grade A+ cells. Designed to fit Group 24 battery boxes, this battery delivers superior performance and reliability.

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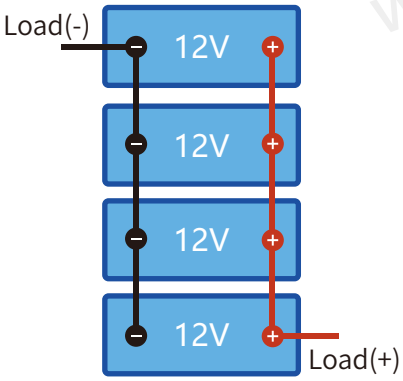
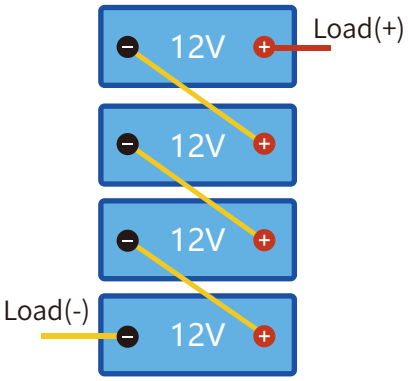
Limitation for Series/Parallel Connection

Support connecting up to 4 identical batteries for up to:
48V 100Ah battery system (when in series) / 12V 400Ah battery system (when in parallel).

Parallel Connection



Series Connection



Two Necessary Steps Before Connecting:

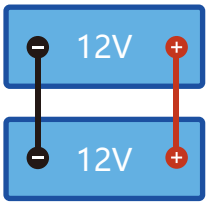
These two steps are necessary in order to reduce the voltage difference between batteries, and through these, the battery system can perform the best of it in series or/and in parallel.

Step 1.

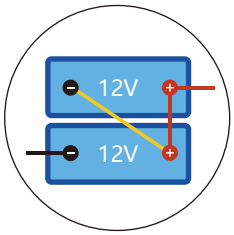
Fully charge your batteries separately.

Step 2.

Connect your batteries one by one in parallel, and leave them together for 12-24hrs.
And then, you can connect your batteries in series or/and in parallel.



How to connect batteries in series:



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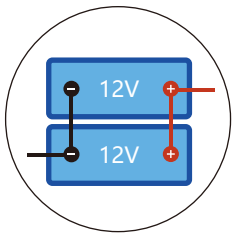
After series connection, the voltage of the battery system will double according to the number of batteries you connect.

E.g. If you connect 2*12V 100Ah batteries in series,the battery system will be 24V (25.6V) 100Ah.

How to connect batteries in parallel:



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After parallel connection, the capacity of the battery system will double according to the number of batteries you connect.

E.g. If you connect 2*12V 100Ah batteries in parallel, the battery system will be 12V (12.8V) 200Ah.

When using series / parallel batteries, they should be fully charged and ensure that the voltage difference of each battery does not exceed 30mv.

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Installation and Manual of Lithium Battery

Installation and Manual of Lithium Battery

Initial Activation:
New batteries are in a "Dormant State" by default upon leaving the factory. To fully activate the battery capacity, follow these steps:
1. Charge the battery to full.
2. Completely discharge the battery.
3. Repeat the charge and discharge cycle three times.

Pre-Installation Charging:
Since the batteries are not fully charged before leaving the factory, please:
- Fully charge the batteries before series installation.
- Test the voltage of each individual battery.
It is recommended that the voltage difference between each battery be within 30mV to extend the battery's lifespan.

Series Connection Guidelines:
Before connecting lithium batteries in series:
- Ensure the batteries are fully charged.
- Do not exceed four batteries in series.

Selecting a Lithium Battery Charger:
When choosing a charger for lithium batteries, consider the following:
- Voltage Matching:
- Correct Output: Ensure the charger's output voltage matches the nominal voltage of the battery pack.
- Charging Current:
- Appropriate Rate: The charging current should be between 0.2C to 0.5C of the battery capacity to ensure safe and efficient charging.
- BMS Compatibility:
- Protective Measures: The charger should be compatible with the battery's BMS to prevent overcharging, over-discharging, and overheating.
- Safety Warning:
- Do Not Use Lead-Acid Chargers: Never use lead-acid battery chargers to charge lithium batteries!
Recommended Charger:
- WattCycle 14.6V 20A $LiFePO_4$ Battery Charger

⚠ Precautions

* Do not make the positive and negative poles of the battery pack short circuit.
* Do not charge in the summer sun exposure or high temperature.
* Do not allow the battery pack to touch any liquid, and avoid rain/moisture.
* Do not disassemble or modify the battery configuration.
* Do not place near flammable and explosive materials, high temperatures, high humidity, or sunlight.

Before use, please match the battery specifications according to the voltage, current, capacity, power, and other parameters on the lithium battery nameplate.

Three Guarantees Principle:
Lithium batteries are electronic and chemical products with high energy density. If they are not used in accordance with the precautions and specifications specified on the battery nameplate and instruction manual, resulting in battery damage or other losses, our company will not provide the three guarantees principle, and the user will be responsible for the consequences. If our company's products are confirmed to have manufacturing quality problems, we will be responsible for the Three Guarantees Principle.

In the following cases, it is not within the warranty service and will be treated according to paid maintenance:
* The selected battery does not meet the usage requirements such as current, voltage, structural strength, or structural size mismatch.
* Battery damage caused by short circuit, improper installation, or use.
* Battery damage caused by impact, deformation, wear, leakage, rust, mud, water, humidity, or long-term overload.
* Damage or other incidental loss caused by charging, discharging, or storage not in accordance with the precautions prescribed by the manufacturer.
The anti-tamper label on the battery has been torn off.

Before use, if you find that there is battery deformation or damage, smelly, smoke or abnormal heat, swelling, water ingress and other abnormal conditions, please do not use it and contact the provider in time to deal with it.

Email:support.us@wattcycle.com
Provider: Shenzhen Washi Energy Co., Ltd.

Preparation for Series Connection:
Before connecting lithium batteries in series, perform the following operations and preparations:
- Ensure the Same Brand: To ensure the consistency of battery performance, specifications and protection mechanisms. Batteries of different brands may differ in chemical composition, BMS parameters (such as overvoltage and overcurrent protection) and charge and discharge curves. Using batteries of different brands in series can easily lead to unbalanced operation of the batteries in the battery pack, resulting in overcharge or over-discharge problems, which in turn affects battery life or causes safety hazards. Batteries of the same brand can ensure that their voltage, capacity and management system match when connected in series, optimize overall performance and ensure safe operation.
- Consistency: To maintain uniform performance, specifications, and protection mechanisms.
- Compatibility: Different brands may have varying chemical compositions, BMS parameters (such as overvoltage and overcurrent protection), and charge-discharge curves.
- Avoid Imbalance: Mixing brands can lead to uneven operation within the battery pack, causing overcharging or over-discharging, which can affect battery life or create safety hazards.
- Optimal Performance: Using the same brand ensures matching voltage, capacity, and management systems, optimizing overall performance and ensuring safe operation.
- Ensure the Same Voltage:
- Uniform Voltage: All batteries should have the same voltage to prevent issues related to mixing different voltage batteries.
- Consistent Battery Capacity:
- Matching Capacity: The capacity (Ah) of the series-connected batteries should be identical to ensure uniform discharge of each battery.
- Balanced Charge:
- Equal Charge Levels: Ensure that the charge levels of all batteries are balanced, meaning each battery has the same charge to prevent unbalanced discharging.
- BMS Compatibility:
- Support for Series Connections: Ensure that each battery's Battery Management System (BMS) supports series connections.
- Confirm Purchase Date:
- Performance Consistency: Batteries naturally age over time, even when not in use, leading to decreased charge or increased internal resistance.
- Matching Production Dates: Batteries purchased within the last six months typically have similar chemical states and health conditions, ensuring balanced charge and discharge performance when connected in series.
- Extended Lifespan: Consistent performance helps in maintaining the overall lifespan of the battery pack.
- Environmental Check:
- Optimal Conditions: Ensure the battery usage environment is dry and maintains an appropriate temperature.
- Avoid Extremes: Prevent operation under extreme conditions to safeguard battery integrity.

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